

for newly added claim 45 is found in Figure 9. An Appendix of Pending Claims is attached for the Examiner's convenience.

In Figure 2A, R<sub>4</sub> should be changed to R<sub>3</sub>. The change corrects a typographical error as shown in the legend for Figure 2A. Applicants have enclosed a copy of Figure 2A with a redline through "4" and a substitute Figure 2A with the number corrected to "3".

Attached hereto is a marked-up version of the changes made to the claims by the "Amendment". The attached page is captioned "**Version with markings to show changes made.**"

Please direct further questions in connection with this Application to the undersigned at (415) 781-1989.

Respectfully submitted,  
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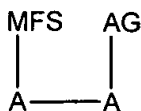
VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

Claims 12-44 have been cancelled.

Claim 1 has been amended as follows:

1. (Amended) A composition comprising a metallic surface and an asymmetric monolayer forming species having the formula:



wherein

A is an attachment linker moiety selected from the group [comprising] consisting of sulfur and phosphonate;

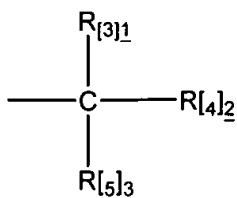
MFS is a monolayer forming species [comprising] selected from the group consisting of conductive oligomers and insulators; [and]

AG is an electroconduit forming species[.] and,

wherein MFS and AG are different.

Claim 9 has been amended as follows:

9. (Amended) A composition according to claim 1 or 8 wherein said AG is branched, having the formula:



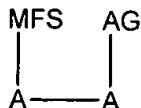
wherein

R<sub>31</sub> through R<sub>53</sub> are independently selected from the group consisting of hydrogen, alkyl, aryl, alcohol, amine, amido, nitro, ether, ester, ketone, imino, aldehyde, alkoxy, carbonyl, halogen, sulfur containing moiety and phosphorus containing moiety[;].

## Appendix of Pending Claims

### CLAIMS

1. (Amended) A composition comprising a metallic surface and an asymmetric monolayer forming species having the formula:



wherein

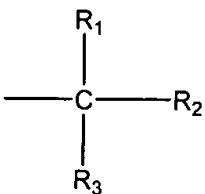
A is an attachment linker moiety selected from the group [comprising] consisting of sulfur and phosphonate;

MFS is a monolayer forming species [comprising] selected from the group consisting of conductive oligomers and insulators; [and]

AG is an electroconduit forming species[.] and,  
wherein MFS and AG are different.

2. A composition according to claim 1 wherein A is sulfur.
3. A composition according to claim 1 wherein said metallic surface is gold.
4. A composition according to claim 1 wherein said MFS is an insulator.
5. A composition according to claim 4 wherein said insulator comprises an alkyl group from about 7 to 20 carbons.
6. A composition according to claim 5 wherein said alkyl group comprises a heteroalkyl.
7. A composition according to claim 5 wherein said alkyl group comprises a substituted alkyl.
8. A composition according to claim 1 wherein said AG comprises an alkyl group from about 1 to 6 carbons.

9. (Amended) A composition according to claim 1 or 8 wherein said AG is branched, having the formula:

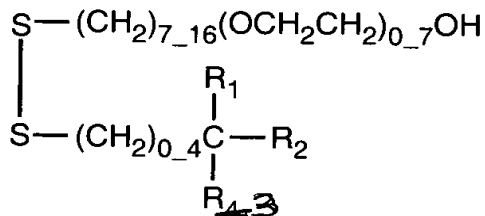


wherein

$R_1$  through  $R_3$  are independently selected from the group consisting of hydrogen, alkyl, aryl, alcohol, amine, amido, nitro, ether, ester, ketone, imino, aldehyde, alkoxy, carbonyl, halogen, sulfur containing moiety and phosphorus containing moiety.

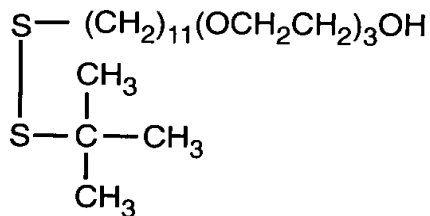
10. A composition according to claim 9 wherein said AG is attached to said attachment linker via a  $(CH_2)_n$  group, wherein  $n$  is an integer from 0 to 4.

11. A composition according to claim 9 wherein said AG is attached directly to said attachment linker.

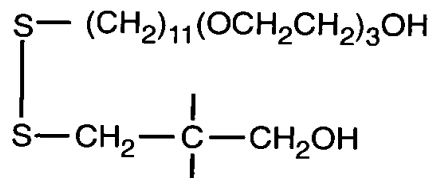


R<sub>1</sub>, R<sub>2</sub>, AND R<sub>3</sub>: H, CH<sub>3</sub>, t-BUTYL, CYCLOALKYL, CH<sub>2</sub>OH, CH<sub>2</sub>NH<sub>2</sub>, CONH<sub>2</sub>, COOH, CH<sub>2</sub>OPO<sub>3</sub><sup>2-</sup>, AROMATIC, ADAMANTYL

**FIG. 2A**



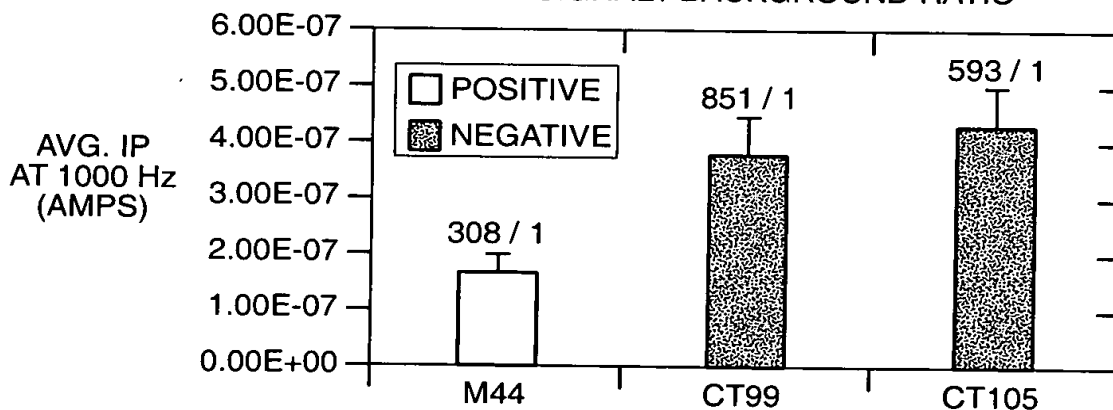
CT99



CT105

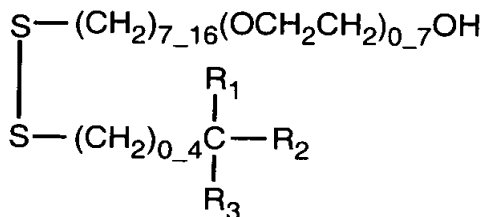
**FIG. 2B**

M44, CT99, CT105 FOR 8Fc (D772) SYSTEM WITH SIGNAL / BACKGROUND RATIO



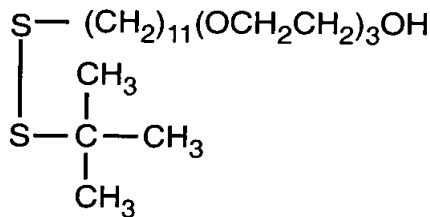
**FIG. 2C**

CHIPS

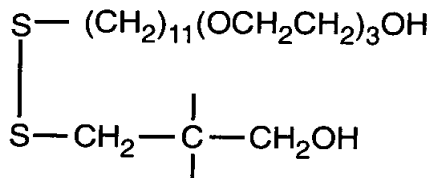


**R<sub>1</sub>, R<sub>2</sub>, AND R<sub>3</sub>:** H, CH<sub>3</sub>, t-BUTYL, CYCLOALKYL, CH<sub>2</sub>OH, CH<sub>2</sub>NH<sub>2</sub>, CONH<sub>2</sub>, COOH, CH<sub>2</sub>OPO<sub>3</sub><sup>2-</sup>, AROMATIC, ADAMANTYL

**FIG. 2A**

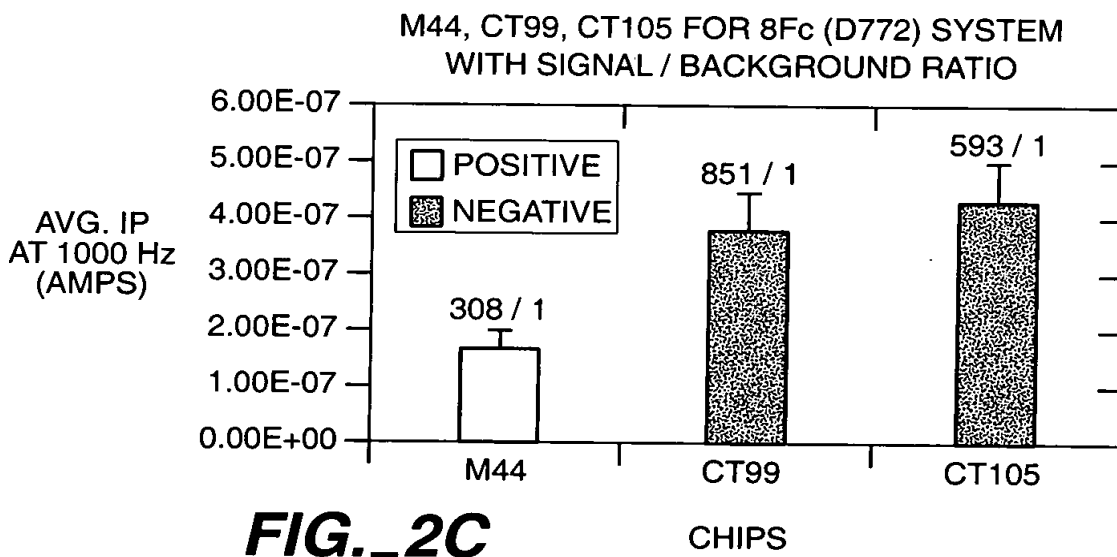


CT99



CT105

**FIG. 2B**



**FIG. 2C**